APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
BAE, JI H

ART UNIT	PAPER NUMBER
2115	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/712,710	MAHMOUD, FADI A.
	Examiner	Art Unit	
	Ji H. Bae	2115	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3 and 9-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 3 and 9, the claims each recite limitation of "installing the operating system on an additional server" or "a method to install an operating system on a server". Applicant's specification does not teach the installing of an operating system on a server, but rather the installing of an operating system on a target storage device [Fig. 3-11] that is separate and distinct from the server [Fig. 2, subsystems and servers].

.Claims 10-16 are rejected by virtue of their dependency.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the target device" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claims 17 recites the limitation "the target storage device" in line 11. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "a server" in line 6. It is unclear whether applicant intends the server recited in line 6 of claim 19 to be the same server recited in claim 17, or a different server.

Claim 20 recites the limitation "a server" in line 11. It is unclear whether applicant intends the server recited in line 11 of claim 20 to the same server recited in claim 17, or a different server.

Claims 2-8 and 18-20 are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 9-16 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility.

Regarding claim 9, the claim recites "a method to install an operating system on *a server*". Applicant's specification teaches the installation of an operating system on a target storage device that is separate and distinct from the server [Fig. 2]. Applicant's claimed invention fails to accomplish the recited functionality of installing an operating system on a server because the claims and specification both state that the operating system is installed on a target storage device. As such, applicant's claimed method is inoperative because it fails to achieve the recited functionality.

Claims 10-16 are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Cherian et al., U.S. Patent No. 6,990,573 B2.

Regarding claim 1, Cherian teaches a method to boot up a server using a target storage device over a network, comprising:

installing an operating system by storing the operating system and a dynamic configuration program [delta drivers, col. 2, lines 16-26, col. 3, lines 54-66] in the target storage device [Fig. shared storage system 40] on the network where the location of the target device is designated by an IP address; and

accessing the operating system on the target storage device using the IP address and the dynamic configuration program, the accessing occurring through data block transfers [block storage protocols, incl. iSCSI, col. 3, lines 33-40][1].

Regarding claim 3, Cherian teaches that the OS may be installed on an additional server by notifying the additional server of the IP address of the target storage device where the

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[1] Although not explicitly stated in Cherian's disclosure, it is inherent that iSCSI uses IP addresses and block transfers to send and receive data through a network.

operating system is located [Fig. 1, servers 20, 22, and 24, first and second instances of OS,

col. 2, lines 20-25].

Regarding claim 5, Cherian teaches that the target storage device is a disk drive.

Regarding claims 6 and 7, Cherian teaches that the server communicates with the target

storage device by using the iSCSI protocol.

Claim 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by

Klimenko, U.S. Patent No. 5,974,547.

Regarding claim 17, Klimenko teaches a method to boot up a server using a storage

device over a network, comprising:

retrieving an operating system boot loader at a first sector of the storage device [col. 11,

lines 59-65], a location of the storage device being designated by an IP address [col. 11,lines

54-59] stored during an operating system installation process; and

booting up the server using an operating system located on the target storage device by

using the operating system boot loader [col. 12, lines 2-8].

Regarding claim 19, Klimenko teaches that retrieving the operating system boot loader

includes:

instructing an option ROM BIOS to direct a kernel to obtain an operating system boot

loader at the first sector [Fig. 2A, BIOS ROM 362 and boot code 364];

copying the operating system boot loader into memory on a server;

running the operating system boot loader to boot up the server.

Regarding claim 20, Klimenko teaches that booting up the server includes copying

operating system data to memory on a server.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 4, and 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cherian in view of Matsunami et al., U.S. Patent No. 6,775,830 B1.

Regarding claim 2, Cherian teaches the method of claim 1, including the usage of an IP

address to determine the location of the target storage device, but does not teach additional

steps of installing the operating system on the target storage device.

Matsunami teaches a method of installing software on a network with steps comprising

[Fig .12, col. 9, lines 10-65]]:

receiving instruction to install the software [Fig. 12, start];;

copying software into the target storage device over the network [col. 9, lines 60-65].

It would have been obvious to one of ordinary skill the art to combine the teachings of

Cherian and Matsunami by installing the operating system of Cherian using the steps outlined

by Matsunami. Cherian assumes that operating system files are already stored on the target

storage device, and does not detail how they were installed in the first place. The teachings of

Matsunami would improve upon the teachings of Cherian by providing these steps. Additionally,

both Cherian and Matsunami teach systems and methods for maintaining software within a

networked environment. Furthermore, the systems of Cherian and Matsunami are analogous to

one another, as both systems employ a storage device with shared and independent storage

areas, as well as a plurality of computer systems that are connected to the storage device. In

addition, it would have been obvious to one of ordinary skill in the art to determine the network

system configuration after power on, as the system would require this information in order to properly configure and install the software.

Regarding claim 4, it would have been obvious to use an operating system that utilizes a graphical user interface. Such operating systems are standard.

Regarding claim 8, it would have been obvious to one of ordinary skill in the art to access the operating system by accessing data on a first sector of a boot device, retrieving the operating system boot loader at the first sector, and booting using the operating system data from the target storage device. The steps recited are part of a standard boot process.

Regarding claim 9, the combination of Matsunami and Cherian teaches the method of claim 2. In addition, Matsunami teaches the steps of:

determining a number of storage devices located in the subsystem [Fig. 4] ;

receiving identification of a target storage device selected from the number of storage devices located in the subsystem [col. 6, lines 23-38].

Regarding claim 10, the limitations recited are obvious in view of design choice. It would have been obvious to one of ordinary skill that any number of user inputs could have been used to initiate the install operation.

Regarding claim 11, it would have been obvious to one of ordinary skill in the art to use an option ROM BIOS kernel to determine the number of storage devices.

Regarding claim 12, it would have been obvious to one of ordinary skill in the art to display the number of storage devices and receive input indicating the target storage device to be used as a boot device.

Regarding claim 13, Cherian teaches the use of the iSCSI protocol.

Regarding claim 14, it would have been obvious to use an operating system with a graphical user interface. Such operating systems are standard.

Regarding claim 15, the combination of Cherian and Matsunami teaches copying

operating system files to the target storage device by using the IP address.

Regarding claim 16, Cherian teaches that the OS may be installed on an additional

server by notifying the additional server of the IP address of the target storage device where the

operating system is located [Fig. 1, servers 20, 22, and 24, first and second instances of OS,

col. 2, lines 20-25].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure:

Singer, Michael, "Cisco Gives iSCSI the Network Boot", Earthweb News, October 29,

2002, available at http://news.earthweb.com/infra/article.php/1490471;

Burokas et al., U.S. Patent No. 6,954,852 B2;

French et al., U.S. Patent No. 6,988,193 B2;

Rissmeyer et al., U.S. Patent No. 6,857,069 B1;

Blood et al., U.S. Patent No. 6,874,060 B2;

Pierre-Louis et al., U.S. Patent No. 6,4221,777 B1;

Abdous et al., U.S. Patent No. 5,577,210;

Hamilton, II et al., U.S. Patent No. 6,834,299 B1;

Haun et al., U.S. Patent No. 6,751,658 B1;

Dickey, U.S. Patent No. 5,881,236.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji H. Bae whose telephone number is 571-272-7181. The examiner can normally be reached on Monday-Friday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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